

REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Claims 1-34 and 36-56 are pending. Claims 1-3, 10-14, 21-25, 32-34, 36, 37, 44-48, 55 and 56 have been rejected. Claims 4-9, 15-20, 26-31, 38-43 and 49-54 have been objected to.

Claims 1, 4, 12, 15, 23, 26, 34, 38, 41-46, and 49 have been amended. No claims have been canceled. No claims have been added. Support for the amendments is found in the specification, the drawings, and in the claims as originally filed. Applicants submit that the amendments do not add new matter.

Claim Objections

Claims 44 and 45 have been objected to because of informalities.

Applicant has amended claims 44 and 45 to overcome the Examiner's objection.

Rejections Under 35 U.S.C. 102

Claims 1-3, 11-14, 22-25, 33, 46-48 and 56 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,701,305 , to Holt, et al. ("Holt").

Applicant has amended claim 1 to particularly point out that adapting the LSA space to reflect the change in the language includes changing a position of the one or more document vectors in the LSA space by the change in the language.

Holt discloses retrieving the information from the database of documents and classifying the documents. More specifically, Holt discloses computing a term-by-document matrix when new documents are added to the document collection (step 160, Figure 4, col. 12, lines 20-32). In particular, Holt discloses

The logic of FIG. 5 determines a new subspace representation by updating the existing subspace with new documents and terms by initially moving from a start block to block 170 where new documents are projected on the original subspace and the residual

is computed. Next, in block 172, the existing term subspace U_k is augmented with the normalized residual, which is orthogonal to the original term subspace, and the document subspace, V_k , is expanded by adding a small identity matrix accordingly.

(Holt, col. 12, lines 33-47) (emphasis added)

Thus, Holt merely discloses augmenting the existing term subspace, and expanding the document subspace when new documents are added, in contrast to adapting the LSA space that includes changing a position of the one or more document vectors in the LSA space by the change in the language, as recited in amended claim 1.

Because Holt fails to disclose all limitations of amended claim 1, Applicant respectfully submits that amended claim 1 is not anticipated under 35 U.S.C. § 102(e) by Holt.

Because amended claims 12, 23, 34, and 46 contain related limitations, Applicant respectfully submits that amended claims 12, 23, 34, and 46 are not anticipated under 35 U.S.C. § 102(e) by Holt.

Given that claims 2-11, 13-22, 24-33, 36-45, and 47-56 depend from amended claims 1, 12, 23, 34, and 46 respectively, and add additional limitations, Applicant respectfully submits that claims 2-11, 13-22, 24-33, 36-45, and 47-56 are not anticipated under 35 U.S.C. § 102(e) by Holt.

Additionally, it is respectfully submitted that Holt fails to disclose applying the document vector transformation matrix to the training document vector and the new document vector to shift a position of each document vector in the LSA space, where the shift in the position reflects the change in the language, as recited in claim 3.

Holt merely discloses augmenting the term subspace with the normalized residual (col. 12, lines 33-47), in contrast to applying the document vector transformation matrix to the training document vector and the new document vector to shift a position of each document vector in the LSA space, where the shift in the position reflects the change in the language, as recited in claim 3.

Rejections Under 35 U.S.C. § 103

Claims 10, 21, 32 and 55 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,289,353 to Holt, in view of U.S. Patent No. 6,289,353 to Hazlehurst, (“Hazlehurst”).

As set forth above, Holt fails to disclose adapting the LSA space that includes changing a position of the one or more document vectors in the LSA space by the change in the language, as recited in amended claim 1.

Hazlehurst discloses generating multiple vector spaces based upon user feedback, changes in user profiles, and new sources of information (col. 5, lines 45-47). More specifically, Hazlehurst discloses generating new vector spaces 35 and 37 that include the subset of the original documents in the original vector space 36 plus new documents (Figure 2, col. 5, lines 50-60), in contrast to adapting the LSA space that includes changing a position of the one or more document vectors in the LSA space by the change in the language, as recited in amended claim 1.

Consequently, even if Holt and Hazlehurst were combined, such a combination would lack the discussed limitations of amended claim 1.

Therefore, Applicant respectfully submits that amended claim 1 is not obvious under 35 U.S.C. § 103(a) over Holt, in view of Hazlehurst.

Given that amended independent claims 12, 23, and 46 contain limitations Applicant respectfully submits that claims 12, 23, and 46 are likewise not obvious under 35 U.S.C. § 103(a) over Holt, in view of Hazlehurst.

Given that claims 10, 21, 32 and 55 depend from amended independent claims 1, 12, 23, and 46 respectively, and add additional limitations, Applicant respectfully submits that claims 10, 21, 32 and 55 are not obvious under 35 U.S.C. § 103 (a) over Holt, in view of Hazlehurst.

Claims 34, 36, 37 and 45 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,862,710 to Marchisio (“Marchisio”), in view of Holt and U.S. Patent No. 6,356,864 to Foltz (“Foltz”).

Applicant has amended claim 34 to particularly point out that means for adapting the LSA space to reflect the change in the language includes means for changing a position of the one or more document vectors in the LSA space by the change in the language.

As set forth above, Holt fails to disclose such limitations of amended claim 34.

Marchisio discloses an information retrieval system that computes the similarity between the information files and the user query. In particular, Marchisio merely discloses for each phrase in the user query, adding a new row to the term-document matrix of the information files (Marchisio, col. 7, lines 43-61), and similarly to Holt, fails to disclose means for adapting the LSA space to reflect the change in the language that includes means for changing a position of the one or more document vectors in the LSA space by the change in the language, as recited in amended claim 34.

Foltz merely discloses generating the pseudo-vector representation of the ungraded sample text and comparing the pseudo-vector representation of the ungraded sample text to the vector representation of the standard text (col. 11, lines 40-45), and similarly to Marchisio and Holt fails to disclose means for adapting the LSA space to reflect the change in the language, wherein the means for adapting includes means for changing a position of the one or more document vectors in the LSA space by the change in the language, as recited in amended claim 34.

Thus, neither Marchisio, Holt, nor Foltz discloses such limitations of amended claim 34.

Consequently, even if Marchisio, Holt, and Foltz were combined, such a combination would lack the discussed limitations of amended claim 34.

Therefore, Applicant respectfully submits that amended claim 34 is not obvious under 35 U.S.C. § 103(a) over Marchisio, in view of Holt and Foltz.

Given that claims 36, 37, and 45 depend from amended independent claim 34, and add additional limitations, Applicant respectfully submits that claims 36, 37, and 45 are not obvious under 35 U.S.C. § 103(a) over Marchisio, in view of Holt and Foltz.

Claim 44 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Marchisio in view of Holt, Foltz and Hazlehurst.

As set forth above, neither Marchisio, Holt, Foltz, nor Hazlehurst discloses a processing system to adapt the LSA space to reflect the change in the language, wherein the adapting includes changing a position of the one or more document vectors in the LSA space by the change in the language, as recited in amended claim 44.

Consequently, even if Marchisio, Holt, Foltz, and Hazlehurst were combined, such a combination would lack the discussed limitations of amended claim 44.

Therefore, Applicant respectfully submits that amended claim 44 is not obvious under 35 U.S.C. § 103(a) over Marchisio, in view of Holt, Foltz, and Hazlehurst.

Allowable Subject Matter

Applicant notes with appreciation the Examiner's allowance of the claims 4-9, 15-20, 26-31, 38-43 and 49-54 if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant herein has amended claims 4, 15, 16, 26, 38, 41-43, and 49 in light of this suggestion.

Therefore, Applicant respectfully submits that amended independent claims 4, 15, 16, 26, 38, 41-43, and 49 are now allowable.

Because claims 5-9, 17-20, 27-31, 39-40, 50-54 depend from independent amended claims 4, 15, 16, 26, 38, and 49 respectively, Applicant respectfully submits that claims 5-9, 17-20, 27-31, 39-40, 50-54 are now allowable.


Conclusion

It is respectfully submitted that in view of the amendments and arguments set forth herein, the applicable rejections and objections have been overcome. If there are any additional charges, please charge Deposit Account No. 02-2666 for any fee deficiency that may be due.

Respectfully submitted,

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